Dorsal scapho-lunar stabilization with Viegas' capsulodesis

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Purpose
Carpal instability begins generally with a scapholunate tear. Its repair is essential to preserve wrist function. Classical techniques, as Blatt's capsulodesis, or Brunelli's tenodesis don't reproduce wrist symmetry and produce stiffness. Authors used a capsulodesis that seems to take in account dorsal wrist ligament symmetry.

Patients and Method
From 2006 to 2012 authors operated prospectively a continuous series. It's composed of 14 men and 12 women of mean age 38 years. Half were working accidents. All patients presented a pain, often a loss of strength, and a half part presented a loss of wrist motion or annoying crackings. The follow-up is 37 months. Viegas' technique consists of a dorsal capsulodesis, using a transverse strip coming from the dorsal intercarpal ligament. This strip is fixed with anchors, and protected with carpal pinning and wrist cast during 8 weeks.

Results
The post-operative data are compared with the preoperative data. The flexion-extension arc decreased of 2°. The radio-ulnar tilt increased of 22°. The grasp improved of 11 kgf, the pain on VAS improved of 3,3 points, the PRWE score of 60 points. Radiologically, the scapho-lunar gap decreased of 0,7 mm and the scapho-lunar angle passed from 57 to 45°. We explore four CPRS among which three with clinical signs, one abrasion of the EPL, one superficial sepsis. Two unfavourable evolutions were taken back, one by die-punch arthrodesis, one by luno-capitate arthrodesis. In one case the scapho-lunar gap reproduced without DIFS.

Discussion
Isometric Capsulodesis (transversal)
Dorsal scapholunate efficient part replacement
DIC Ligament is more resistant than dorsal scapholunate part

Conclusion
This technique allows to stabilize a non directly repairable scapho-lunate tear, chronic, without fixed carpal instability, corresponding to arthroscopic EWAS stages 3 and 4. It's suitable for Garcia-Elias grade 2-3 SL instabilities. Consequences are generally simple, but we must beware of a CPRS, or a pin complication.

The dorsal scapho-lunar Viegas capsulodesis has specifications of a reliable non stiffing stabilization in case of dynamic instability. The results are satisfactory.

Table - Comparison with other series

<table>
<thead>
<tr>
<th>Technique</th>
<th>Flexion (°)</th>
<th>Extension (°)</th>
<th>Radiol Tilt (°)</th>
<th>Ulnar Tilt (°)</th>
<th>Group</th>
<th>VAS Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viegas (3)</td>
<td>77</td>
<td>17</td>
<td>20</td>
<td>17</td>
<td>32</td>
<td>32</td>
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<td>Brunelli (2)</td>
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<td>22</td>
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References